

Kanlaya Khemplia 2014: Stability Comparison of Sugarcane Varieties between Plant Cane and Ratoon Cane by GGE. Master of Science (Plant Breeding), Major Field: Plant Breeding, Faculty of Agriculture at Kamphaeng Saen. Thesis Advisor: Associate Professor Rewat Lersrutaiyotin, D.Agr. 215 pages.

The results revealed that the number of sugarcane varieties having less difference in stability between plant cane and ratoon cane were higher in CCS and sugar yield than those in cane yield. On the other hand, the number of sugarcane varieties having high stability only in plant cane or ratoon cane were higher in cane yield than those in CCS and sugar yield. The sugarcane varieties having high stability in cane yield, CCS and sugar yield of both plant cane and ratoon cane were Kamphaeng Saen 01-1-12, Kamphaeng Saen 94-13 and Khon Khen 3, while LK 92-11 had high stability in cane yield, CCS and sugar yield only in ratoon cane. When trials were grouped by regions, the high level of difference in stability of cane yield and sugar yield of sugarcane varieties were observed in eastern and northeastern, while the low level were observed in both upper and lower part of western. In CCS, the high level of difference in stability of sugarcane varieties were observed in northern and northeastern, while the low level were observed in eastern. In comparison of stability of sugarcane varieties between plant cane and ratoon cane, the higher level of difference in stability of cane yield and sugar yield were observed in plant cane than in ratoon cane of most regions, except northern, while the level of difference in stability in plant cane and ratoon cane in CCS were diversified in each region. When trials were grouped by amounts of rainfall, the higher level of difference in stability of cane yield of sugarcane varieties were observed in trials having high amount of rainfall (more than 1,400 mm) than in trials having low amount of rainfall. Moreover, the trials having high amount of rainfall also had the low level of difference in stability of sugarcane varieties between plant cane and ratoon cane in cane yield, CCS and sugar yield. When trials were grouped by soil series, the higher level of difference in stability of sugarcane varieties in cane yield and sugar yield were observed in plant cane than those in ratoon cane of most trials. In CCS, the less different number of sugarcane varieties were observed in those having the close level of stability in plant cane and ratoon cane, in those having higher level of stability in plant cane and in those having higher level of stability in ratoon cane.

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Thesis Advisor's signature